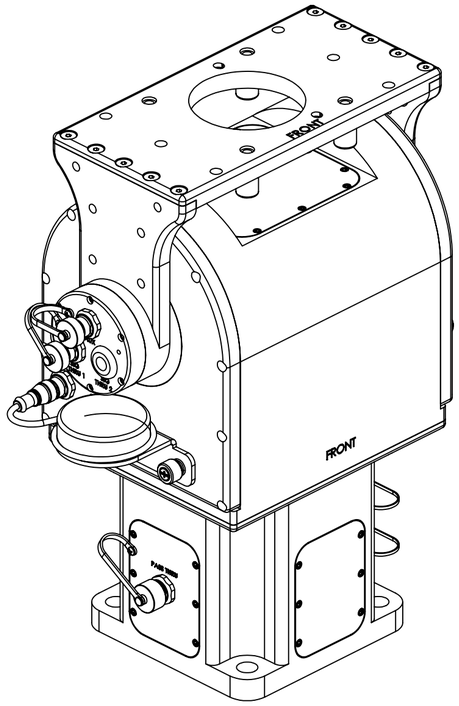
| REV | DESCRIPTION | DATE | APPROVED |
|---|---|---|---|
| B | CN601275 | 2023-07-20 | CLC |

NOTES: UNLESS OTHERWISE SPECIFIED

1. LINKALIGN-C360MPT-20 CONFIGURABLE OPTIONS PER TABLE I. LINKALIGN-C360MPT-20-K2RF63-1PT9 IS NEXTMOVE STANDARD PRODUCT. CUSTOMIZATIONS AVAILBLE UPON REQUEST. CONTACT NEXTMOVE FOR MORE INFORMATION
2. USE INTERFACE CONTROL DRAWING IN CONJUNCTION WITH DATASHEET N500205
3. SEE TABLE II FOR AVAILABLE LINKALIGN-C360MPT-20 ACCESSORY OPTIONS
4. POSITIONER POWERED BY POWER OVER ETHERNET 50-57 VDC, 4 PAIR, PASSIVE (INDOOR RATED 50 VDC POWER SUPPLY INCLUDED WITH POSITIONER. NOT SHOWN IN DRAWING). OPTIONAL DC POWER INPUT MAY BE USED AS ALTERNATE CUSTOM CONFIGURATION, 20-60 V. STANDBY POWER DRAWS LESS THAN 10 W. MAXIMUM POWER DRAW, 60 W
5. EXTERNAL CONSTRUCTION COMPRISED OF HARD COAT ANODIZE ALUMINUM WITH STAINLESS STEEL HARDWARE
6. CONTINUOUS AZIMUTH TRAVEL UTILIZING A SLIP RING AND RF ROTARY JOINT WITH UP TO 12°/SEC DRIVE RATE (MAX LOAD). ROTARY JOINT AND DRIVE RATE CUSTOMIZABLE (SEE TABLE I). CONTACT NEXTMOVE FOR ADDITIONAL INFORMATION
7. 190° (+/-95°) ELEVATION TRAVEL WITH UP TO 11°/SEC DRIVE RATE (MAX LOAD). DRIVE RATE CUSTOMIZABLE (SEE TABLE I). CONTACT NEXTMOVE FOR ADDITIONAL INFORMATION
8. -19° TO 140°F (-28° TO 60°C) OPERATIONAL TEMPERATURE RANGE (NO LOAD) OR -40° TO -140°F (-40° TO 60°C) WITH EXTENDED TEMPERATURE RANGE OPTION (SEE TABLE I). -40° TO 158°F (-40 TO 70°C) NON-OPERATIONAL TEMPERATURE RANGE
9. 0.01° FEEDBACK RESOLUTION
10. AZIMUTH AND ELEVATION BACKLASH LESS THAN 0.8°
11. 15.45" (39.24 cm) HIGH X 11.97" (30.40 cm) WIDE X 7.36" (18.69 cm) DEEP. DIMENSIONS APPLY WHEN POSITIONER IS AT 0° AZIMUTH AND 0° ELEVATION ANGLES. ENVELOPE DIMENSIONS MAY VARY WITH CUSTOMIZATIONS
12. WEIGHT APPROXIMATELY 35 LBS (16 kg)
13. PAYLOAD NOT TO EXCEED 50 LBS (45.4 kg) OR 20 FT-LBS (67.8 Nm) OF TORQUE ABOUT THE ELEVATION AXIS. TO CALCULATE TORQUE, TAKE THE DISTANCE FROM THE PAYLOAD CENTER OF GRAVITY TO DATUM -B- IN FEET AND MULTIPLY BY THE PAYLOAD WEIGHT. MAXIMUM OPERATING TORQUE MAY BE REDUCED AT TEMPERATURES BELOW -7°F (-22°C) AND/OR WITH PERIPHERAL DEVICES. ELEVATION TORQUE IS CUSTOMIZABLE (SEE TABLE I). CONTACT NEXTMOVE FOR ADDITIONAL INFORMATION
14. TABLE TOP MOUNTING HOLES USES NEXTMOVE TYPE 4.750-P INTERFACE. ACCESSORIES AVAILABLE TO MATE WITH THIS INTERFACE (SEE TABLE II). CONTACT NEXTMOVE FOR ADDITIONAL INFORMATION
15. CENTER OF GRAVITY 0.4" (1.0 cm) IN THE X-DIRECTION, 7.5" (19.1 cm) IN THE Y-DIRECTION AND 0" (0 cm) IN THE Z-DIRECTION
16. STANDARD RF PASS THRU COMPRISED OF DUAL CHANNEL RF ROTARY JOINT (SENRING PART NUMBER HF0218-64-24S) (CH 1 DC-18 GHz & CH 2 DC-4 GHz), (1) 20" (51 cm) INTERNAL LENGTH LOW LOSS 142 COAX CABLE (FAIRVIEW MICROWAVE PART NUMBER FMCA1236-20), (1) 8" (20 cm) INTERNAL LENGTH LOW LOSS 142 COAX CABLE (FAIRVIEW MICROWAVE PART NUMBER FMCA1265-8), (1) 20" (51 cm) INTERNAL LENGTH LMR-100A-UF COAX CABLE (PASTERNACK PART NUMBER PE3W14423-20) & (1) 8" (20 cm) INTERNAL LENGTH LMR-100A-UF COAX CABLE (PASTERNACK PART NUMBER PE3W15443-8). EXTERNAL RF CONNECTORS N-TYPE. SEE SHEET 4 AND TABLE V FOR MORE DETAILS. RF ROTARY JOINT AND RF CABLES CUSTOMIZABLE (SEE SHEET 5 & TABLE VI, VII & VIII). CONTACT NEXTMOVE FOR MORE INFORMATION
17. RF ROTARY JOINT (SENRING PART NUMBER HF0218-64-24S) AVERAGE POWER CAPABILITY CH 1 50 W @ 18 GHz & CH 2 50W @ 4 GHz
18. SIGNAL PASS THRU WIRES ABLE TO CARRY UP TO 60 VAC / 75 VDC, 2A. SIGNAL PASS THRU CUSTOMIZABLE (SEE TABLE I). CONTACT NEXTMOVE FOR MORE INFORMATION
19. CONNECTORS MAY BE CUSTOMIZED UPON REQUEST
20. ETHERNET PASS THRU MAY BE ADDED RESULTING IN ADDITIONAL HEIGHT TO THE POSITIONER
21. GPS HEADING UNIT MAY BE ADDED UPON REQUEST
22. SUPPLEMENTAL INTERFACE CONTROL DRAWING FOR CUSTOM CONFIGURATIONS AVAILABLE UPON REQUEST

**TABLE II (SOME ACCESSORY OPTIONS) (MAY REQUIRE ADAPTERS)**

| ACCESSORY DESCRIPTION | ACCESSORY PART NUMBER | ACCESSORY ICD |
|---|---|---|
| TRIPOD ASSEMBLY, LIGHTWEIGHT, FOLDING, 2 INCH OD MAST | ACC-N900320-1 | ICDN900320 |
| TRIPOD ASSEMBLY, HEAVY DUTY, 2 INCH OD MAST | ACC-N900413-1 | ICDN900413 |
| TRIPOD ASSEMBLY, LIGHTWEIGHT, 2 INCH OD MAST | ACC-N900868-1 | ICDN900868 |
| QUADPOD ASSEMBLY, LIGHTWEIGHT, 2 INCH OD MAST | ACC-N900869-1 | ICDN900869 |



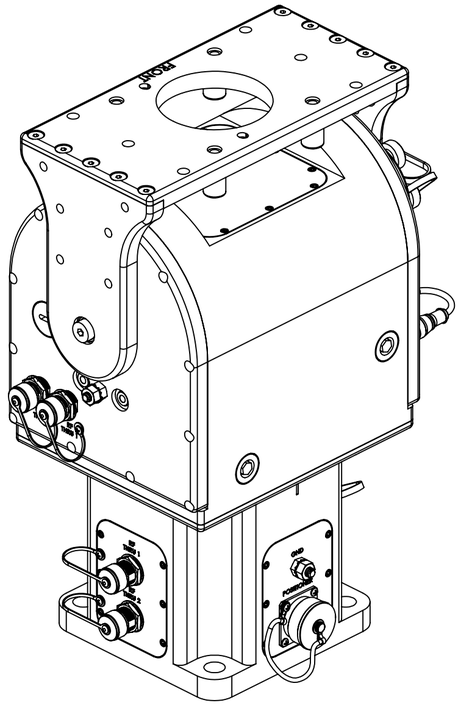




**TABLE I**

***BUILDING A PART NUMBER*** ***STANDARD OPTIONS***

**LA-C360MPT - 20 - K 2RF63 - 1PT9 - 100** <<EXAMPLE

**SHIELDED ETHERNET CABLE STANDARD LENGTHS**
- 050 = 50 ft
- 100 = 100 ft
- 150 = 150 ft
- 200 = 200 ft
- 250 = 250 ft
- 300 = 300 ft
- NC = No Cable
- XXX = Custom Cable Length
- MCO = Mating Connector Only

**CUSTOM CONFIGURATION**
- = Standard options - leave blank
- DC = DC Input Power
- 1PT9 = (1) 10 Pin Signal Pass Thru (9 Pins Active & 1 Pin Not Connected)
- 2PT10 = (2) 10 Pin Signal Pass Thrus
- GR = GHU Ready
- ET = Extended Temperature

**RF CABLE PASS THRU OPTIONS**
- = No RF Pass Thrus - leave blank
- 2RF01 = Qty then RF Cable Code - See RF Pass Thru Options Table VII or VIII on Sheet 5 for Code

**ROTARY JOINT OPTIONS**
- = No RF Rotary Joint used - leave blank
- X = Use Rotary Joint Code - See Rotary Joint Options Table VI on Sheet 5 for Code

**MOTOR DRIVES AND PAYLOAD**
- 20 = Az Travel @ 12°/s, El Travel @ 12°/s, El torque 20 ft-lbs, 50 lb payload. Typically paired with ~2 ft antenna
- 25 = Az Travel @ 12°/s, El Travel @ 1°/s, El torque 80 ft-lbs, 50 lb payload. Typically paired with ~2 ft antenna
- 26 = Az Travel @ 12°/s, El Travel @ 4°/s, El torque 30 ft-lbs, 50 lb payload. Typically paired with ~2 ft antenna

**MODEL**
- LA-C360MPT = LinkAlign-C360MPT (Continuous azimuth, +/-90° elevation)

**SYMBOL KEY**
NOTE PL ITEMS

**PROPRIETARY AND CONFIDENTIAL**
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NEXTMOVE TECHNOLOGIES, LLC
HOLLIS, NH 03049
www.nextmovetech.com

**UNLESS OTHERWISE SPECIFIED:**
DIMENSIONS ARE IN INCHES
TOLERANCES:
ANGLE ± .5 DEGREES
TWO PLACE DECIMAL ±.030
THREE PLACE DECIMAL ±.010
INTERPRET DIM AND TOL PER ASME Y14.5M - 1994

**THIRD ANGLE PROJECTION**
DO NOT SCALE DRAWING

| | | |
|---|---|---|
| DRAWN | C. CHEYNE | 2021-08-18 |
| CHECKED | S. CHEYNE | 2021-08-18 |
| ME APPR. | C. CHEYNE | 2021-08-18 |
| EE APPR. | J. MINEKIME | 2021-08-18 |

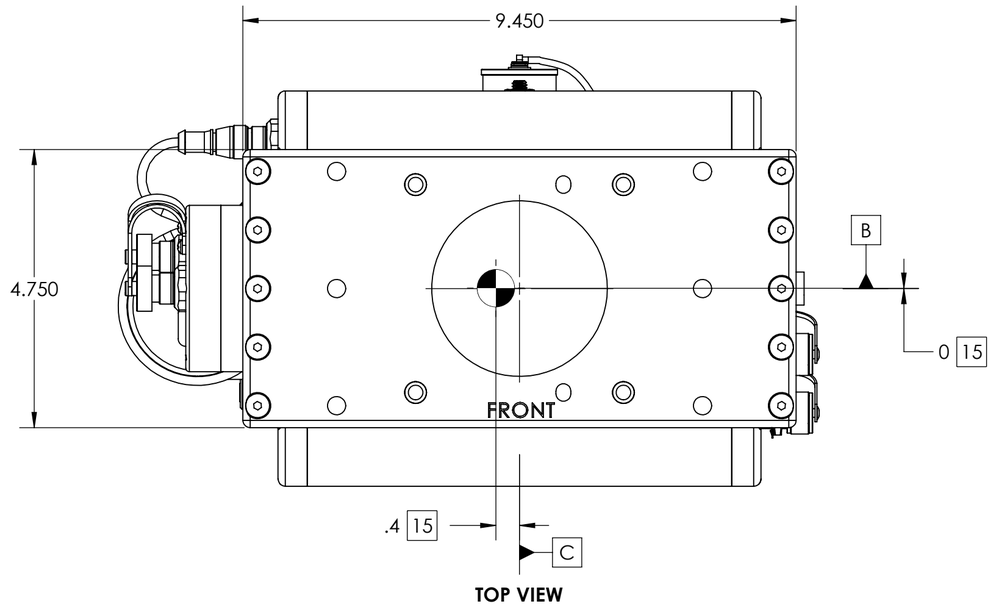
PART NO.
SEE TABLE I

NEXTMOVE TECHNOLOGIES

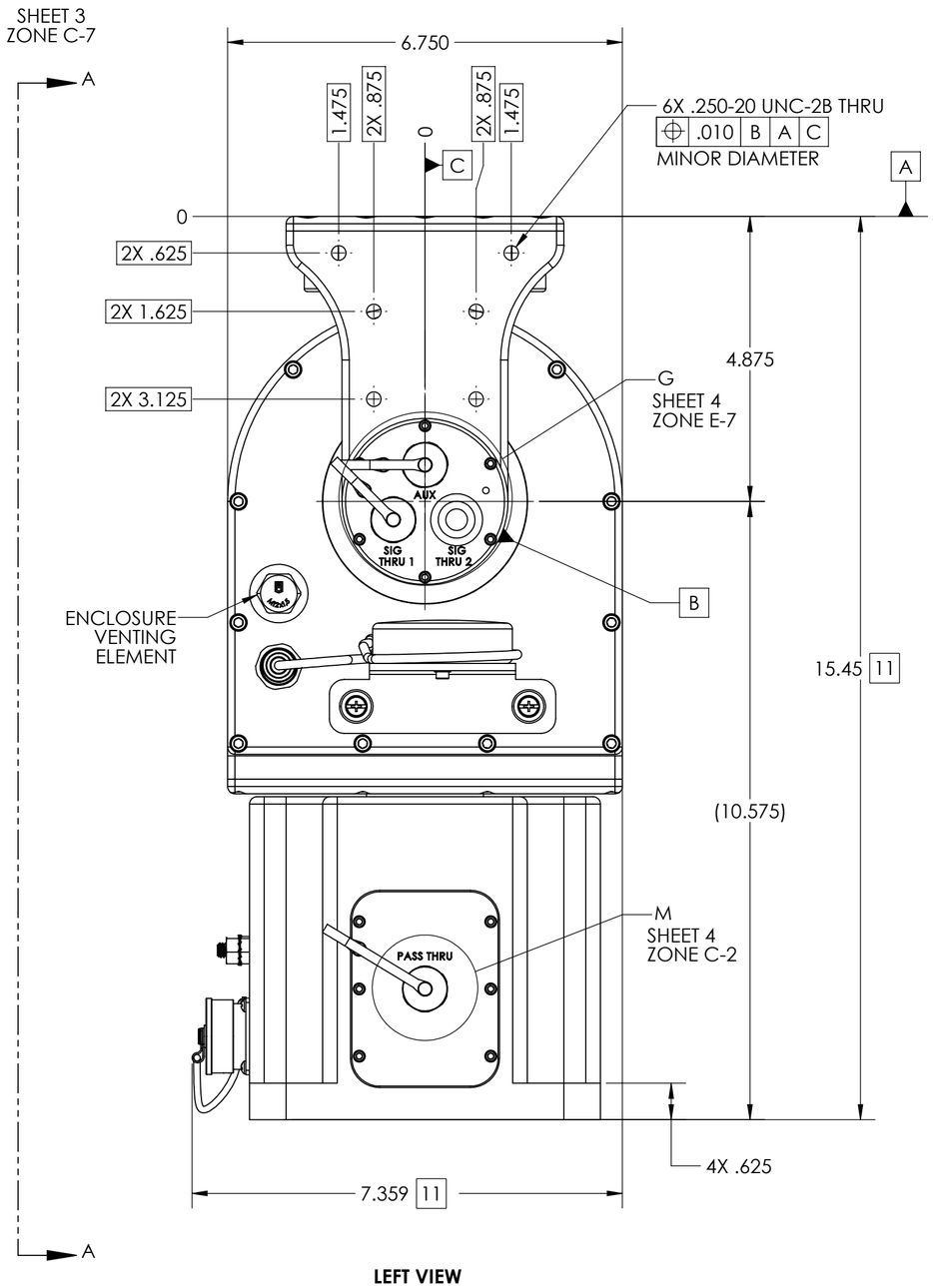
TITLE:
LINKALIGN-C360MPT-20 INTERFACE CONTROL DRAWING

| SIZE | DWG. NO. | REV |
|---|---|---|
| C | ICDN900952 | B |

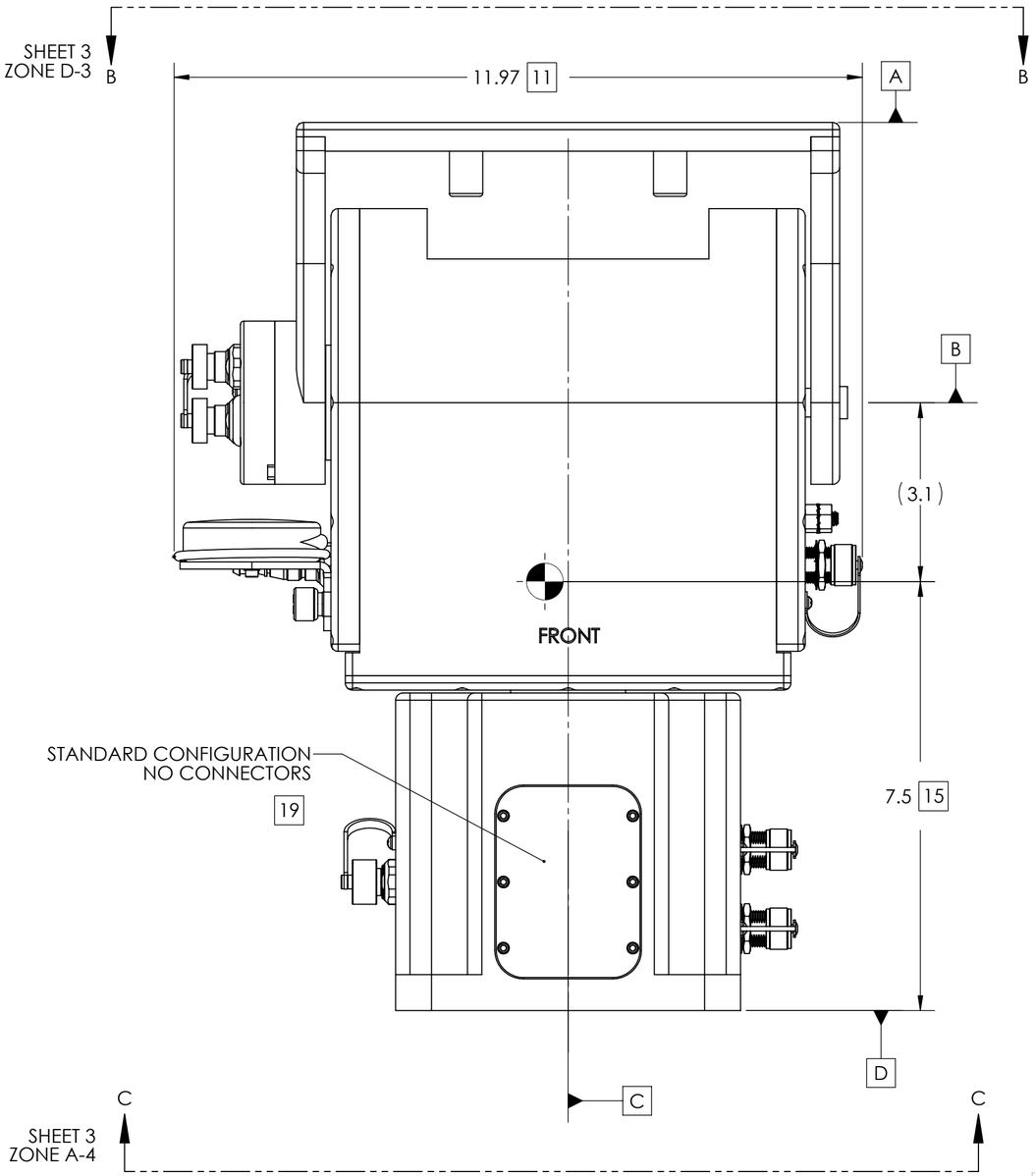
SCALE: 1:3 SHEET 1 OF 5




TOP VIEW

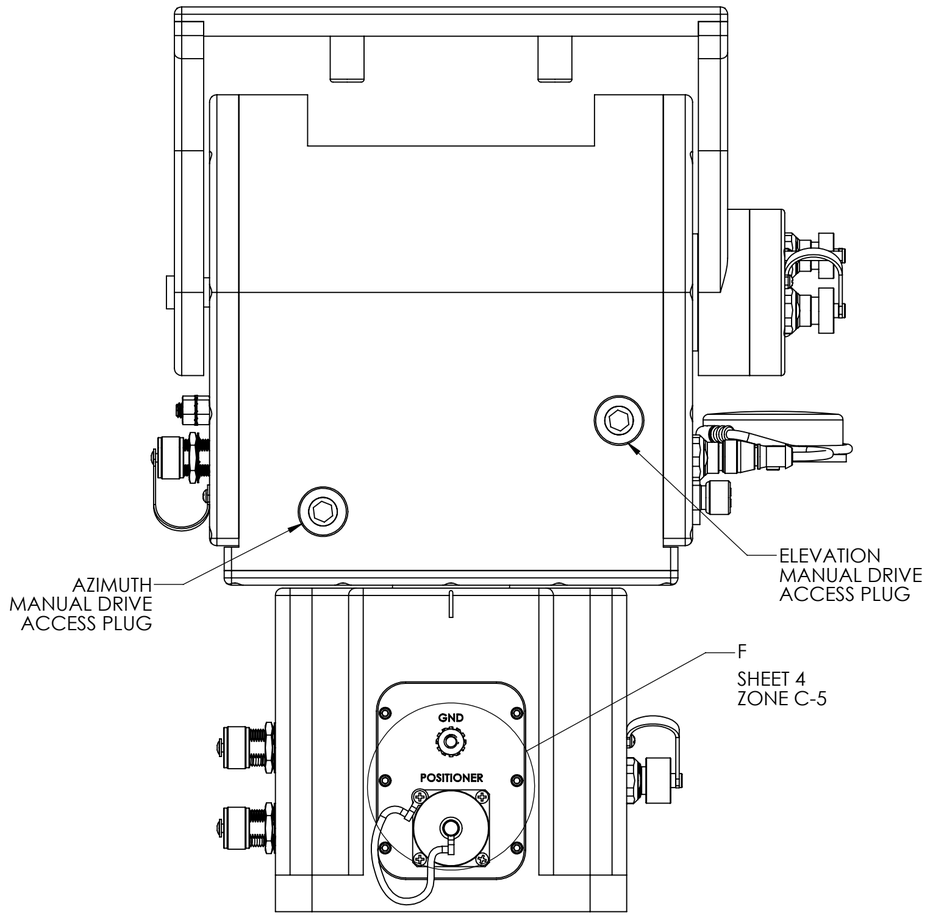



LEFT VIEW

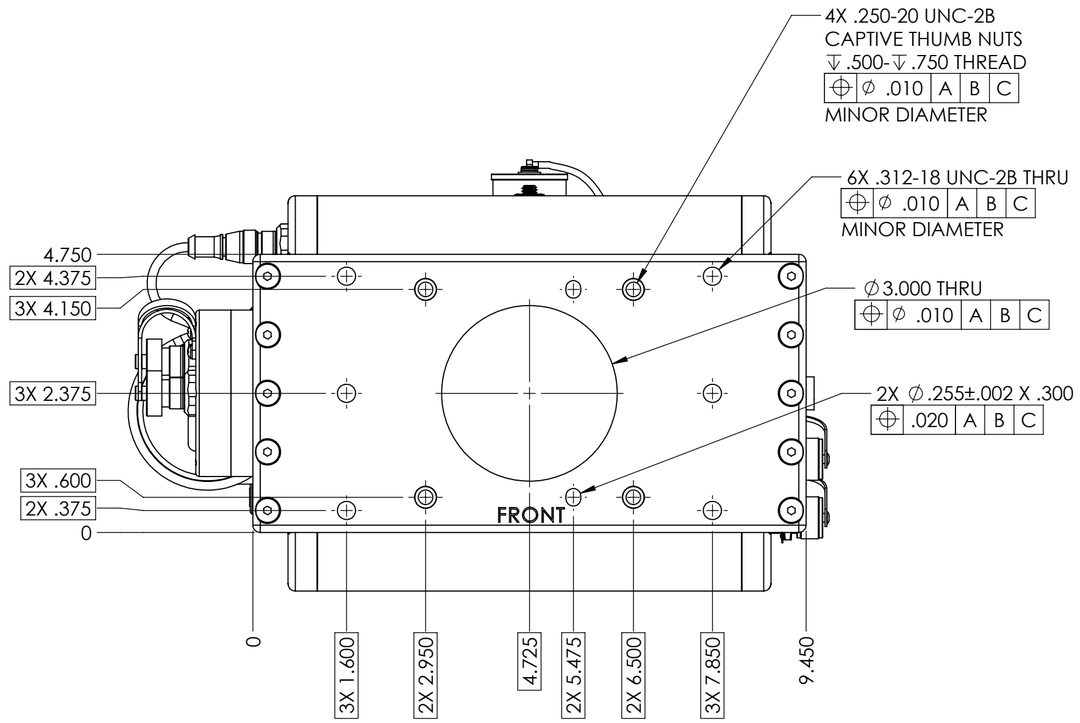



FRONT VIEW

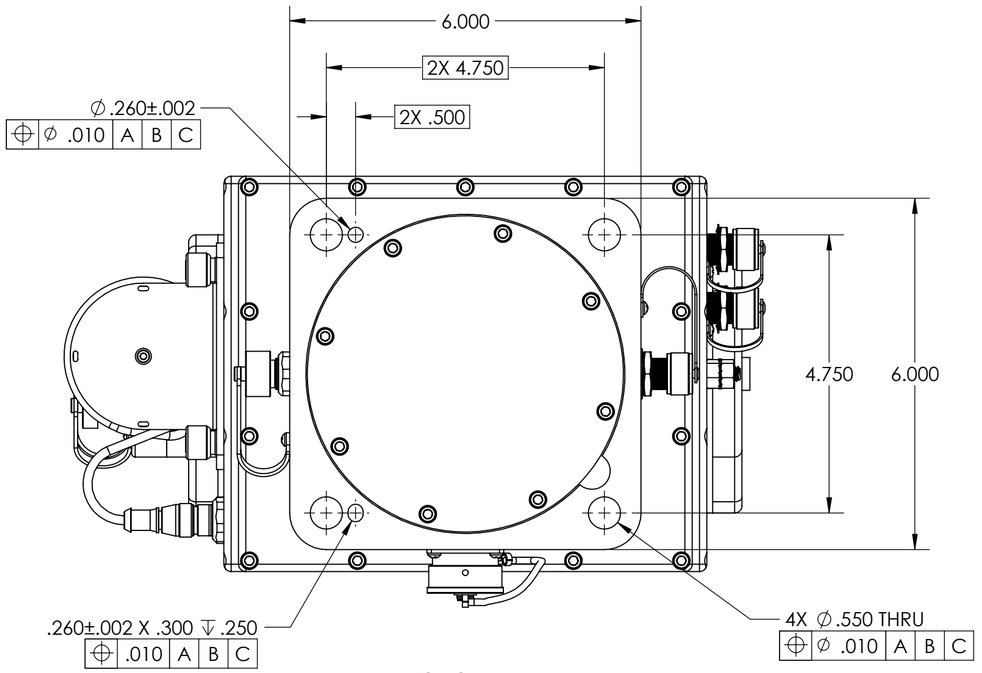
| SIZE | DWG. NO. |
|---|---|
| C | ICDN900952 |
| SCALE: 1:2 | SHEET 2 OF 5 |




**REAR VIEW**
VIEW A-A
SCALE 1 : 2
SHEET 2
ZONE D-8



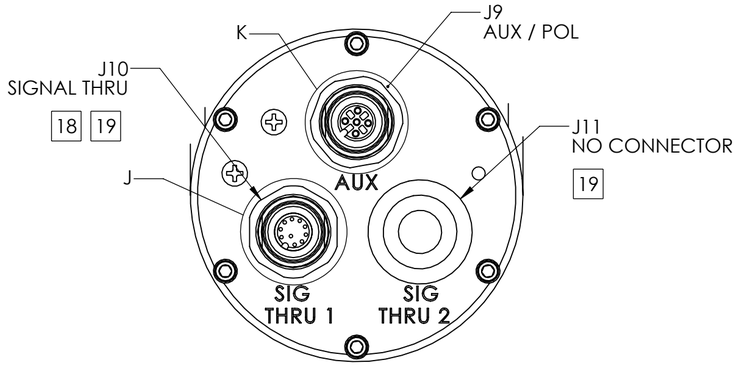

**TOP VIEW**
VIEW B-B
SCALE 1 : 2
SHEET 2
ZONE D-5




**BOTTOM VIEW**
VIEW C-C
SCALE 1 : 2
SHEET 2
ZONE A-5
TABLE TOP MOUNTING HOLES
NEXTMOVE TYPE 4.750-P INTERFACE

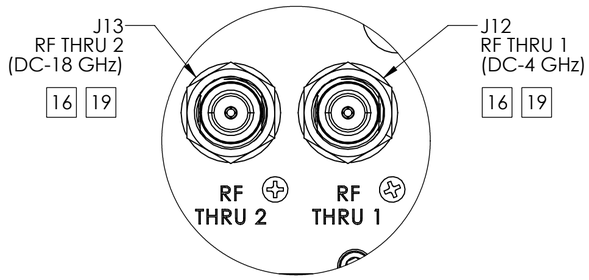
14

| SIZE | DWG. NO. |
|---|---|
| C | ICDN900952 |
| SCALE: 5:8 | SHEET 3 OF 5 |



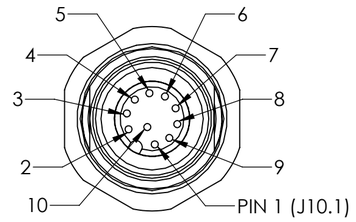

CONNECTORS SHOWN FROM MATING SIDE
J9 USED FOR NEXTMOVE OPTIONAL POLARIZATION ACCESSORY
J10 SIGNAL PASS THRU CONNECTOR

**LEFT VIEW ELEVATION PANEL CONNECTORS**
DETAIL G
SCALE 1 : 1
SHEET 2 ZONE D-6
SHOWN WITHOUT PROTECTIVE CAPS



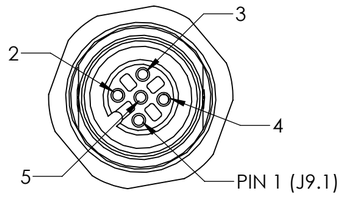

CONNECTORS SHOWN FROM MATING SIDE
J12 & J13 MATES WITH N-TYPE MALE RF CONNECTOR
RF THRU 1 DC-4 GHz & RF THRU 2 DC-18 GHz

**RIGHT VIEW ELEVATION SIDE PLATE CONNECTORS**
DETAIL H
SCALE 1 : 1
SHOWN WITHOUT CONNECTOR CAPS
SEE TABLE V FOR J12 & J13
RF PASS THRU CONNECTOR PINOUT DETAILS



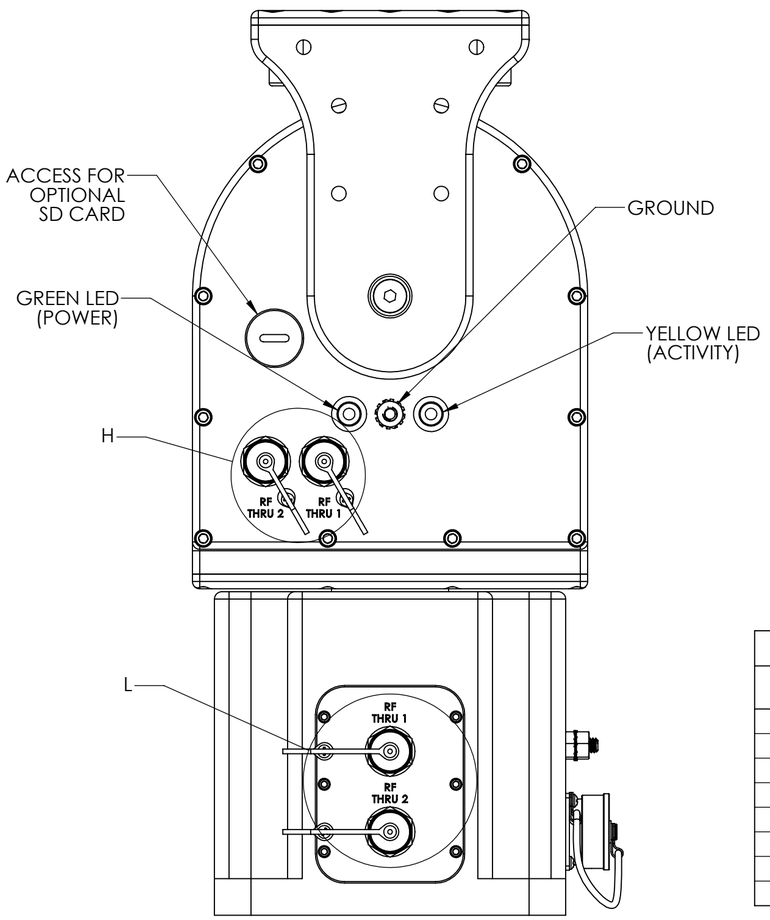

J10 SIGNAL THRU CONNECTOR
MATES WITH TURCK
P/N RS 10T-* (* LENGTH IN METERS)
OR SIMILAR IN SERIES TURCK CONNECTORS

**LEFT VIEW, ELEVATION PANEL CONNECTOR**
DETAIL J
SCALE 2 : 1
SEE TABLE V FOR J10 SIGNAL
PASS THRU CONNECTOR PINOUT DETAILS

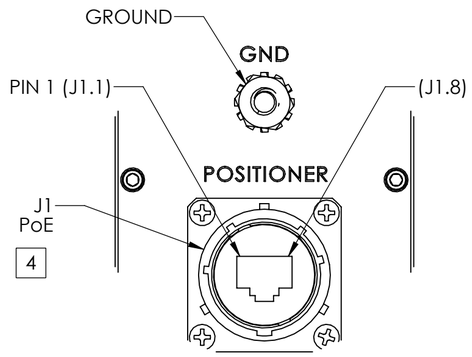



J9 AUX CONNECTOR
MATES WITH TURCK
P/N RS 4.5T-* (*LENGTH IN METERS)
OR SIMILAR IN SERIES TURCK CONNECTORS

**LEFT VIEW, ELEVATION PANEL CONNECTOR**
DETAIL K
SCALE 2 : 1
SEE TABLE IV FOR J9 AUX/POL
CONNECTOR PINOUT DETAILS

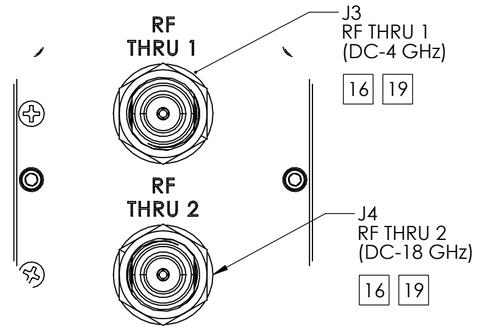



**RIGHT VIEW**
VIEW E-E
SCALE 1 : 2
SHEET 2
ZONE E-1



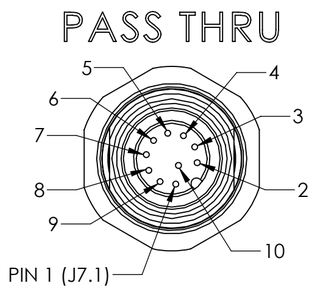

J1 CONNECTOR SHOWN FROM MATING SIDE
MATES WITH AMPHENOL P/N RJF6B

**REAR VIEW AZIMUTH BASE CONNECTORS**
DETAIL F
SCALE 1 : 1
SHEET 3, ZONE D-6
SHOWN WITHOUT CONNECTOR CAP
SEE TABLE III FOR J1 PoE CONNECTOR PINOUT DETAILS




CONNECTORS SHOWN FROM MATING SIDE
J3 & J4 MATES WITH N-TYPE MALE RF CONNECTOR
RF THRU 1 DC-4 GHz & RF THRU 2 DC-18 GHz

**RIGHT VIEW AZIMUTH BASE CONNECTORS**
DETAIL L
SCALE 1 : 1
SHOWN WITHOUT CONNECTOR CAPS
SEE TABLE V FOR J3 & J4
RF PASS THRU CONNECTOR PINOUT DETAILS




J7 SIGNAL THRU CONNECTOR
MATES WITH TURCK
P/N RKC 10T-* (* LENGTH IN METERS)
OR SIMILAR IN SERIES TURCK CONNECTORS

**LEFT VIEW AZIMUTH BASE CONNECTOR**
DETAIL M
SHEET 2 ZONE B-6
SCALE 2 : 1
SHOWN WITHOUT CONNECTOR CAPS
SEE TABLE V FOR J7 SIGNAL
PASS THRU CONNECTOR PINOUT DETAILS

**TABLE III (PoE CONNECTOR)**

| CONNECTOR DESIGNATION | FUNCTION |
|---|---|
| J1.1 | DATA PAIR 1 |
| J1.2 | DATA PAIR 1 |
| J1.3 | DATA PAIR 2 |
| J1.4 | +48 VDC PoE POWER INPUT |
| J1.5 | +48 VDC PoE POWER INPUT |
| J1.6 | DATA PAIR 2 |
| J1.7 | DC RETURN FOR PoE INPUT |
| J1.8 | DC RETURN FOR PoE INPUT |

**TABLE IV (AUX/POLARIZATION CONNECTOR)**

| CONNECTOR DESIGNATION | FUNCTION |
|---|---|
| J9.1 | GND |
| J9.2 | +/-12 VDC MOTOR |
| J9.3 | +/-12 VDC MOTOR |
| J9.4 | POT WIPER |
| J9.5 | +3.3V |

**TABLE V (PASS THRU CONNECTORS)**

| FROM | TO |
|---|---|
| SIGNAL PASS THRU | |
| J7.1 | J10.1 |
| J7.2 | J10.2 |
| J7.3 | J10.3 |
| J7.4 | J10.4 |
| J7.5 | J10.5 |
| J7.6 | J10.6 |
| J7.7 | J10.7 |
| J7.8 | J10.8 |
| J7.9 | J10.9 |
| J7.10 (NOT CONNECTED) | J10.10 (NOT CONNECTED) |
| RF PASS THRU | |
| J3.1 | J12.1 |
| J4.1 | J13.1 |

SIZE C | DWG. NO. ICDN900952
SCALE: 5:8 | SHEET 4 OF 5

| TABLE VI - ROTARY JOINT OPTIONS | | | |
|---|---|---|---|
| **Rotary Joint Code** | **Manufacturer** | **MFR Part Number** | **Description** |
| A | Pasternack | PE1406 | Rotary Joint, 8 GHz SMA Female to SMA Female |
| B | Spinner | 835087 | Rotary Joint, DC-18 GHz N Female to N Female |
| C | Spinner | 835045 | Rotary Joint, DC-40 GHz 2.92 Female to 2.92 Female |
| D | Senring | HF0118-56 | RF Rotary Joint Slip Ring, DC to 18GHz |
| E | Senring | HF0218-31 | Rotary Joint, 18 GHz, High Frequency Dual Channel |
| F | Diamond Antenna & Microwave | 18-2120-0 | Rotary Joint, Type N, 200 W max Power at 6 GHz |
| G | Spinner | 153158 | Rotary Joint, 50 GHz, Dual Channel |
| H | Spinner | BN153139 | Rotary Joint, 18 GHz (CH1), 13GHz (CH2), High Frequency Dual Channel |
| J | Spinner | BN945421 | Rotary Joint, 1 Channel, DC-5 GHz, N-Type Female to N-Type Female |
| K | Senring | HF0218-64-24S | Rotary Joint, 18 GHz, High Frequency Dual Channel with 24 Signal Wires |
| L | Spinner | BN522214 | Rotary Joint, 4 Channel, DC to 4 GHz |

| TABLE VII - RF CABLE PASS THRU OPTIONS | | |
|---|---|---|
| **RF Cable Code** | **RF Cable Type** | **Description** |
| RF01 | RG316 | DC-3 GHz RF Cable Pass Thrus (RF Cable RG316) (N-Type) |
| RF02 | LMR-100A-UF | DC-5.8 GHz (Max Input Power @ 5.8 GHz - 13W) RF Cable Pass Thru (RF Cable LMR-100A-UF) (N-Type) |
| RF03 | LMR-195UF | DC-5.8 GHz (Max Input Power @ 5.8 GHz - 50W) RF Cable Pass Thru (RF Cable LMR-195UF) (N-Type) |
| RF04 | LMR-240UF | DC-5.8 GHz (Max Input Power @ 5.8 GHz - 80W) RF Cable Pass Thru (RF Cable LMR-240UF) (N-Type) |
| RF05 | FlexCore 210 | DC-18 GHz RF Cable Pass Thru (RF Cable FlexCore 210) (N-Type) |
| RF06 | PE-P160LL or LL160 | DC-18 GHz RF Cable Pass Thru (RF Cable Low Loss 160) (N-Type) |
| RF07 | UFA147B | DC-11 GHz RF Pass Thru (RF Cable UFA147A) (N-Type) |
| RF08 | LMR-100A-UF | DC-5.8 GHz SMA RF Cable Pass Thru (RF Cable LMR-100A-UF) (SMA Type) |
| RF09 | FlexCore 210 | DC-18 GHz RF Cable Pass Thru (RF Cable FlexCore 210) (2.92 Type) |
| RF10 | T-Flex 405 | DC-40 GHz RF Cable Pass Thru (RF Cable T-Flex 405) (2.92 Type) |
| RF11 | RG179 | DC-3 GHz RF Cable Pass Thrus (RF Cable RF179) (BNC Type) |
| RF12 | UFB205A | DC-18 GHz RF Pass Thru (RF Cable UFB205A) (N-Type) |
| RF13 | UFA210B | DC-18 GHz RF Pass Thru (RF Cable UFA210B) (N-Type) |
| RF14 | True Blue 290 | DC-18 GHz RF Pass Thru (RF Cable True Blue 290) (N-Type) |
| RF15 | PE-P142LL or LL142 | DC-18 GHz RF Pass Thru (RF Cable Low Loss 142) (N-Type) |

| TABLE VIII - RF CABLE PASS THRU COMBINATION OPTIONS | | | |
|---|---|---|---|
| **RF Cable Code** | **RF Cable Type** | | **Description** |
| RF60 | PE-P160LL or LL160 | LMR-100A-UF | (1) DC-18 GHz RF Cable Pass Thru (RF Cable Low Loss 160) (N-Type) & (1) DC-5.8 GHz RF Cable Pass Thru (RF Cable LMR-100A-UF) (N-Type) |
| RF61 | RG316 | RG179 | (2) DC-3 GHz RF Cable Pass Thrus (RF Cable RG316) (N-Type) & (1) BNC Type DC-3 GHz RF Cable Pass Thrus (RF Cable RF179) |
| RF62 | PE-P142LL or LL142 | LMR-100A-UF | (1) DC-18 GHz RF Cable (RF Cable Low Loss 142) (N-Type) & (1) DC-5.8 GHz RF Cable Pass Thru (RF Cable LMR-100A-UF) (N-Type) |